

# **Advanced Java Lab**

## **Week-2**

**Roll Number: 238W1A12C4**

### **1. Insert, Update, Delete Using PreparedStatement**

#### **Code:**

```
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change
 this license
 */

package com.mycompany.mavenproject2;
import java.sql.*;

public class Mavenproject2 {
    public static void main(String[] args) {

        String url = "jdbc:mysql://localhost:3306/mydb";
        String user = "root";
        String password = "";

        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection con = DriverManager.getConnection(url, user, password);
            System.out.println("Connected!");

            // INSERT -----
            String insertSQL = "INSERT INTO Person (PersonID, FirstName, City) VALUES
            (?, ?, ?)";
            PreparedStatement insertStmt = con.prepareStatement(insertSQL);
```

```

insertStmt.setInt(1, 101);
insertStmt.setString(2, "Rahul");
insertStmt.setString(3, "Hyderabad");
int insertCount = insertStmt.executeUpdate();
System.out.println(insertCount + " row inserted.");

// UPDATE -----
String updateSQL = "UPDATE Person SET City=? WHERE PersonID=?";
PreparedStatement updateStmt = con.prepareStatement(updateSQL);
updateStmt.setString(1, "Bangalore");
updateStmt.setInt(2, 101);
int updateCount = updateStmt.executeUpdate();
System.out.println(updateCount + " row updated.");

// DELETE -----
String deleteSQL = "DELETE FROM Person WHERE PersonID=?";
PreparedStatement deleteStmt = con.prepareStatement(deleteSQL);
deleteStmt.setInt(1, 101);
int deleteCount = deleteStmt.executeUpdate();
System.out.println(deleteCount + " row deleted.");

con.close();

} catch (Exception e) {
    System.out.println("Error : " + e.getMessage());
}
}
}

```

**Output:**

```
--- exec:3.1.0:exec (default-cli) @ mavenproject2 ---
Connected!
1 row inserted.
1 row updated.
1 row deleted.
-----
BUILD SUCCESS
-----
Total time: 3.593 s
Finished at: 2025-11-22T17:39:40+05:30
-----
```

## 2. Explore ResultSet navigation methods and retrieve data in tabular format.

### Code:

```
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public class Mavenproject2 {
    public static void main(String[] args) {

        String url = "jdbc:mysql://localhost:3306/mydb";
        String user = "root";
        String password = "";

        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection con = DriverManager.getConnection(url, user, password);

            Statement stmt = con.createStatement(
```

```

        ResultSet.TYPE_SCROLL_INSENSITIVE,
        ResultSet.CONCUR_READ_ONLY
    );

    ResultSet rs = stmt.executeQuery("SELECT PersonID, FirstName, City FROM
Person");

    // Print table header
    System.out.println("-----");
    System.out.printf("%-10s %-15s %-15s\n", "ID", "Name", "City");
    System.out.println("-----");

    // Move to first record
    if (rs.first()) {
        do {
            System.out.printf("%-10d %-15s %-15s\n",
                rs.getInt("PersonID"),
                rs.getString("FirstName"),
                rs.getString("City")
            );
        } while (rs.next());
    }

    System.out.println("-----");

    // Move to last record
    if (rs.last()) {
        System.out.println("Last Record → " + rs.getString("FirstName"));
    }

```

```

        // Move to first record

        if (rs.first()) {

            System.out.println("First Record → " + rs.getString("FirstName"));

        }


        // Move to absolute row number 2

        if (rs.absolute(2)) {

            System.out.println("2nd Row → " + rs.getString("FirstName"));

        }


        con.close();


    } catch (Exception e) {

        System.out.println("Error : " + e);

    }

}
}

```

## Output:

```

exec:3.1.0:exec (default-cli) @ mavenproject2 ---
-----
ID      Name      City
-----
1       John      New York
2       Rahul     Hyderabad
3       Meera     Mumbai
4       David     London
-----
Last Record ? David
First Record ? John
2nd Row ? Rahul
-----
BUILD SUCCESS
-----
Total time:  4.238 s
Finished at: 2025-11-22T17:44:05+05:30
-----

```